

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-7 and 9-21 are pending. Claims 4 and 5 are withdrawn. Claim 8 is canceled without prejudice or disclaimer, Claim 1 is amended, and new Claims 12-21 are added by the present amendment. As amended Claim 1 and new Claims 12-21 are supported by the original disclosure,¹ no new matter is added.

In the outstanding Office Action, the drawings were objected to; the specification was objected to; Claims 1, 3, 6, and 9-11 were rejected as anticipated by Ohkuni et al. (U.S. Patent No. 6,210,593, hereinafter "Ohkuni"); Claim 2 was rejected as unpatentable over Ohkuni in view of Kaminishizono (Japanese Patent Publication No. 2000049100); Claim 7 was rejected as unpatentable over Ohkuni in view of Koike (U.S. Patent Application Publication No. 20020072240); and Claim 8 was rejected as unpatentable over Ohkuni in view of Koike and Yamasaki et al. (U.S. Patent No. 6,797,068, herein "Yamasaki").

Initially, applicants and applicants' representatives thank Primary Examiner Hassanzadeh and Examiner Crowell for the interview held on June 14, 2006 to discuss the present case. During the interview, differences between the claimed invention and the cited references were discussed in detail, as were proposed amendments as presented herein. Primary Examiner Hassanzadeh and Examiner Crowell agreed that the claims as amended herein overcome the rejections of record.

With regard to the objection to the drawings, Claim 8 is canceled. Accordingly, the objection to the drawings is believed to be overcome.

¹See, e.g., original Claims 1-11, paragraph 29, and Figure 2C.

With regard to the objection to the specification, the specification is amended to correct an informality. Accordingly, the objection to the specification is believed to be overcome.

With regard to the rejection of Claim 1 as unpatentable over Ohkuni, that rejection is respectfully traversed.

Amended Claim 1 recites in part:

a process chamber;
an upper electrode assembly;
a fluid flow control member including a plurality of recesses; and
a chuck assembly including a plurality of lift pin assemblies, for lifting the fluid flow control member at at least one location, each lift pin assembly including a lift pin configured to engage with a respective recess of the fluid flow control member to directly lift the fluid flow control member.

In contrast, Ohkuni describes a focus ring 111 that is actuated by the rotation of cylindrical member 110. To prevent focus ring 111 from turning with the cylindrical member 110, focus ring 111 includes projecting portions 113 that fit in recess portions 112 of the stage 102.² The outstanding Office Action cited focus ring 111 of Ohkuni as “a fluid flow control member” and projecting portions 113 of Ohkuni as “a plurality of lift pin assemblies.”³ However, none of projecting portions 113 of Ohkuni are “configured to engage with a respective recess of the fluid flow control member to directly lift the fluid flow control member,” as the projecting portions 113 of Ohkuni are part of the focus ring 111 of Ohkuni. Further, Ohkuni does not teach that focus ring 111 includes any recesses, much less recess that are engaged with a lift pin assembly to directly lift the fluid flow control member. Accordingly, Ohkuni does not teach “a fluid flow control member” or “a chuck assembly” as defined in amended Claim 1. Consequently, Claim 1 (and Claims 2-7 and 9 dependent therefrom) is patentable over Ohkuni.

²See Ogure, paragraphs 164 to 166.

³See the outstanding Office Action at page 4, lines 3-4.

Claims 10 and 11 recite “a hole for facilitating lifting of the focus ring by lift pins” and “a recess for facilitating lifting of the focus ring by lift pins.” As noted above, focus ring 111 includes projecting portions 113 that fit in recess portions 112 of the stage 102. Thus, focus ring 111 of Ohkuni does not include any holes or recesses, much less a hole or recess for facilitating lifting of the focus ring by lift pins. Accordingly, Claims 10 and 11 are patentable over Ohkuni.

With regard to withdrawn Claims 4 and 5, it is respectfully requested that these claims be rejoined and allowed, as they depend from Claim 1, which is believed to be allowable.

With regard to the rejection of Claim 2 as unpatentable over Ohkuni in view of Kaminishizono, it is noted that Claim 2 is dependent from Claim 1, and thus is believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Kaminishizono does not cure any of the above-noted deficiencies of Ohkuni. Accordingly, it is respectfully submitted that Claim 2 is patentable over Ohkuni in view of Kaminishizono.

With regard to the rejection of Claim 7 as unpatentable over Ohkuni in view of Koike, it is noted that Claim 7 is dependent from Claim 1, and thus is believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Koike does not cure any of the above-noted deficiencies of Ohkuni. Accordingly, it is respectfully submitted that Claim 7 is patentable over Ohkuni in view of Koike.

With regard to the rejection of Claim 8 as unpatentable over Ohkuni in view of Koike and further in view of Yamasaki, it is noted that Claim 8 is dependent from Claim 1, and thus is believed to be patentable for at least the reasons discussed above. Further, it is respectfully submitted that Yamasaki and Koike do not cure any of the above-noted deficiencies of Ohkuni. Accordingly, it is respectfully submitted that Claim 7 is patentable over Ohkuni in view of Koike and further in view of Yamasaki.

New Claims 12 and 13 are supported at least by paragraph 29 and Figure 2C of the original disclosure. New Claims 12 and 13 are dependent from Claim 1, and thus are patentable for at least the reasons described above with respect to Claim 1. In addition, Claims 12 and 13 recite subject matter that further defines over the cited art.

Claim 12 recites in part, “the lift pin extends through a horizontal surface of the chuck assembly when the lift pin is fully retracted.” In contrast, the projecting portions 113 of Ohkuni extend in a horizontal direction.⁴ Accordingly, the projecting portions 113 of Ohkuni do not extend through any horizontal surface of the chuck at any time, much less when the projecting portions 113 of Ohkuni are fully retracted. Thus, Ohkuni does not teach or suggest that “the lift pin extends through a horizontal surface of the chuck assembly when the lift pin is fully retracted.” Therefore, Claim 12 further defines over Ohkuni.

Claim 13 recites in part, “the lift pin engages the respective recesses of the fluid flow control member when the lift pin is fully retracted.” As noted above with respect to Claim 1, Ohkuni does not teach or suggest that focus ring 111 includes any recesses. Consequently, Ohkuni does not teach or suggest that “the lift pin engages the respective recesses of the fluid flow control member when the lift pin is fully retracted.” Thus, Claim 13 further defines over Ohkuni.

New Claims 14-21 are supported at least by original Claims 1-11, paragraph 29, and Figure 2C of the original disclosure.

New Claim 14 recites in part:

- a process chamber;
- an upper electrode assembly;
- a fluid flow control member including a plurality of recesses; and
- a chuck assembly including a plurality of lifting means for lifting the fluid flow control member at at least one location, each lifting means engaging a respective recess of the

⁴See Ohkuni, Figure 1.

fluid flow control member to directly lift the fluid flow control member.

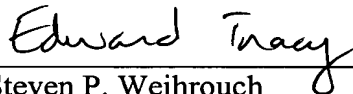
As noted above with respect to Claim 1, Ohkuni does not teach or suggest a fluid flow control member including a plurality of recesses. Further, it is respectfully submitted that Ohkuni does not teach or suggest "lifting means engaging a respective recess of the fluid flow control member to directly lift the fluid flow control member" as recited in Claim 14. Consequently, Claim 14 (and Claims 15-21 dependent therefrom) is also patentable over Ohkuni for at least the reasons described above with respect to Claim 1.

In addition, Claims 15 and 16 recite similar subject matter as Claims 12 and 13, respectively. Thus, new Claims 15 and 16 further define over Ohkuni for at least the reasons described above with respect to Claims 12 and 13, respectively.

Consequently, in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-7 and 9-21 patentably distinguishes over the cited art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Steven P. Weihrouch
Attorney of Record
Registration No. 32,829

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Edward Tracy
Registration No. 47,998